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**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, D.C. 20554

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Public Notice	)	
	)	
Wireless Telecommunications Bureau	)	CC Docket 94-102
Requests Targeted Comment on Wireless	)	DA 99-1049
E911 Phase II Automatic Location	)	
Identification Requirements	)	

**REPLY COMMENTS OF THE PERSONAL  
COMMUNICATIONS INDUSTRY ASSOCIATION**

The Personal Communications Industry Association ("PCIA"),<sup>1</sup> hereby respectfully submits its reply to the comments filed in response the Commission's *Notice* in the above-captioned proceeding.<sup>2</sup> As described in greater detail below, the record in this proceeding demonstrates the following: (1) the Commission's rules and policies related to handset-based methods of meeting the Phase II requirements must be flexible enough to encourage new and innovative solutions; (2) carriers should not be required to retrofit or replace existing handsets in order to meet the Phase II requirements; and (3) the Commission should replace its root mean

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<sup>1</sup> PCIA is an international trade association established to represent the interests of the commercial and private mobile radio service communications industries and the fixed broadband wireless industry. PCIA's Federation of Councils includes: the Paging and Messaging Alliance, the PCS Alliance, the Site Owners and Managers Association, the Association of Wireless Communications Engineers and Technicians, the Private Systems Users Alliance, the Mobile Wireless Communications Alliance, and the Wireless Broadband Alliance. As an FCC-appointed frequency coordinator for the Industrial/Business Pool frequencies below 512 MHz, the 800 MHz and 900 MHz Business Pools, the 800 MHz General Category frequencies for Business Eligibles and conventional SMR systems, and the 929 MHz paging frequencies, PCIA represents and serves the interests of tens of thousands of FCC licensees.

<sup>2</sup> Public Notice, *Wireless Telecommunications Bureau Requests Targeted Comment on Wireless E911 Phase II Automatic Location Identification Requirements*, DA 99-1049 (rel. June 1, 1999) ("*Notice*").

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square (“RMS”) accuracy measurement with the measurement methodology proposed by the Wireless E9-1-1 Implementation Ad Hoc Group (“WEIAD”).

## **I. INTRODUCTION**

In its *Notice*, the Commission sought comment on a number of issues related to the provision of automatic location information (“ALI”) using handset-based approaches in the context of implementing Phase II of the Commission’s wireless E911 requirements.<sup>3</sup> First, comment was sought on the standards and implementation deadlines for the handset-based approaches suggested by the Association of Public Safety Communications Officials (“APCO”) and SnapTrack. Second, the Commission solicited input on how to ensure that roamers and customers who choose not to replace their handsets frequently can access Phase II service in areas where the carrier opts for a handset-based solution. Finally, the Commission sought comment on whether the Commission should clarify or modify its root mean square (“RMS”) methodology for determining ALI accuracy. A number of commenters, including PCIA, responded to each of these requests for information.

## **II. THE RECORD REFLECTS THAT ANY RULES AND IMPLEMENTATION SCHEDULES REGARDING HANDSET-BASED SOLUTIONS MUST NOT DISCOURAGE THE USE OF NEW AND INNOVATIVE TECHNOLOGIES**

In its opening round comments, PCIA stated that the Commission’s implementation schedule and accuracy standards for handset-based ALI technologies must not interfere with the ability of manufacturers to create innovative, technology neutral methods of locating wireless

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<sup>3</sup> See 47 C.F.R. § 20.18.

callers, and must not diminish the ability of carriers to choose from among these technologies. PCIA specifically noted that by using inflexible deadlines for the number of ALI-capable handsets that must be deployed, the APCO proposal might lock carriers into using the current generation of handset-based technologies, rather than the technologies that will soon be available. In addition, if the FCC should adopt any part of the APCO proposal, PCIA requested that in cases where providing ALI for non-service initialized handsets is not technically feasible, carriers not be required to do so. With regard to the SnapTrack proposal, PCIA noted that the requirement to initially deploy location handsets in advance of the October 1, 2001, deadline is a very ambitious one that carriers may not be capable of meeting.

There was significant record support for PCIA's proposals. Preliminarily, AT&T Wireless Services, Inc. ("AT&T") notes that any standards the Commission adopts should not preclude carriers from using either a handset-based or network-based solution or place carriers at a competitive disadvantage if they choose one or both of these solutions.<sup>4</sup> Motorola Inc. ("Motorola") agrees with PCIA that the Commission should maintain its technology neutral position on ALI, allowing for both handset and network-based solutions.<sup>5</sup> Similarly, BellSouth Corporation ("BellSouth") urges the Commission to reject the proposals of SnapTrack and APCO because adoption of rigid deployment schedules ignores the reality of ALI, which is that not all PSAPs will be ready for this information at the same time due to the resource constraints of individual PSAPs.<sup>6</sup> BellSouth also notes that imposition of specific deployment schedules for

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<sup>4</sup> AT&T Comments at 2.

<sup>5</sup> Motorola Comments at 3.

<sup>6</sup> BellSouth Comments at 3.

carriers opting for handset-based ALI would be arbitrary because carriers choosing network solutions are not bound by a similar schedule.<sup>7</sup>

APCO joins BellSouth in observing that few wireless users will have access to Phase II capability by October 1, 2001, because 23 states lack any form of cost recovery, and among the states that do have cost recovery mechanisms in place, most will be inadequate to fund the expected Phase II costs.<sup>8</sup> Thus, according to APCO, maintaining the October 1, 2001, deadline does not necessarily level the playing field between network-based and handset-based solutions, because the current situation has already created an implementation schedule that will not begin for most wireless users until long after October 2001.<sup>9</sup> Based on this fact, APCO concludes that handset-based solutions will not cause any real delay in Phase II and may actually speed delivery and possibly improve accuracy.<sup>10</sup> PCIA endorses this conclusion.

Against this background, PCIA joins AT&T in endorsing more flexible approaches to the provision of ALI exemplified by Sprint PCS' proposal, which combines a network-based software solution as a first step followed by a gradual phase-in of a handset-based solution.<sup>11</sup> While not all air interfaces will allow for such a network-based interim approach and the cost of undertaking such an approach may prove to be prohibitive, the Commission should be open to such creative implementation schemes.

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<sup>7</sup> *Id.* at 5.

<sup>8</sup> APCO Comments at 3.

<sup>9</sup> *Id.* at 4.

<sup>10</sup> *Id.*

<sup>11</sup> AT&T Comments at 3.

By contrast, the Commission should not accept the rigid implementation schedules proposed by AirTouch Communications Inc. (“AirTouch”)<sup>12</sup> and Integrated Data Communications, Inc. (“IDC”).<sup>13</sup> Like the APCO and SnapTrack proposals, these plans might force wireless carriers to implement handset-based technologies that are not sufficiently mature. The result of such premature deployment will be to deprive wireless customers of the best possible location technologies. In addition, with specific regard to the implementation schedule proposed by IDC, it is worth noting that no equipment manufacturer participating in the proceeding has ever indicated that such an accelerated implementation scheme is within the realm of possibility.<sup>14</sup> Therefore, PCIA continues to believe that flexible implementation deadlines for handset-based solutions will best serve the public interest.<sup>15</sup>

Finally, PCIA disagrees with AirTouch’s contention that any handset penetration benchmarks adopted by the Commission should apply only to digital handsets.<sup>16</sup> As described above, PCIA opposes any rigid implementation deadlines for handset-based solutions. If,

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<sup>12</sup> AirTouch Comments at 9-12.

<sup>13</sup> IDC Comments at 7.

<sup>14</sup> *See e.g.*, Motorola Comments, Ericsson Comments.

<sup>15</sup> Regarding flexible implementation rules, PCIA strongly endorses ALLTEL Communications Inc.’s (“ALLTEL’s”) contention that “the Commission’s own CPNI rules, by treating handsets as CPE and therefore distinct from the underlying CMRS service, present a substantial obstacle to a carrier’s efforts to market new GPS-capable handsets to existing subscribers.” ALLTEL Comments at 3 n.8. PCIA therefore reiterates its earlier suggestion that CMRS providers be permitted to use CMRS-derived CPNI to market CPE. *See* PCIA Petition for Reconsideration, CC Docket No. 96-115 (May 26, 1998); *see also* PCIA Petition for Forbearance, CC Docket No. 96-115 (June 29, 1998).

<sup>16</sup> AirTouch Comments at 15-16.

however, the Commission decides to utilize such benchmarks, it should not carve out a policy exception for analog handsets since the purpose of the E911 ALI requirements—whether implemented through a network-based solution or a handset-based solution—is to increase the safety of the nation’s wireless customers. With that purpose in mind, it makes little sense to remove analog customers from the pool of wireless users who will benefit from the Phase II requirements. Further, any exclusion of analog handsets from the ALI requirements runs contrary to the Commission’s “technology neutral” E911 implementation policy.<sup>17</sup> Therefore, whatever policy the Commission decides upon should apply uniformly to analog and digital systems.

### **III. MANY COMMENTERS AGREE WITH PCIA THAT CARRIERS SHOULD NOT BE REQUIRED TO RETROFIT OR REPLACE SUBSCRIBER HANDSETS TO MAKE THEM ALI CAPABLE**

In its opening comments, PCIA stated that the FCC should not require carriers to retrofit or replace handsets to make them ALI capable because such retrofitting or replacement is unnecessary to ensure that most customers are supplied with ALI-capable handsets, and will create significant expenses and administrative difficulties for carriers. Many commenters agreed with this assessment. In particular, Aerial Communications, Inc. (“Aerial”) agreed with PCIA that the handset churn that occurs naturally in the wireless industry will obviate the need for any mandatory handset replacement or retrofitting. As described by Aerial, by the end of 2005, only

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<sup>17</sup> *Revision of the Commission’s Rules to Ensure Compatibility With Enhanced 911 Emergency Calling Systems*, 12 FCC Rcd 22665, 22725 (1997) (“*E911 Reconsideration Order*”).

two percent of Aerial's subscriber base should be using non-ALI capable handsets due to rate of churn.<sup>18</sup>

BellSouth further questioned the Commission's authority to "require retrofitting of non-defective handsets at a carrier's expense, particularly when there is no question of carrier liability, and in many cases the handsets were not supplied by carriers."<sup>19</sup> BellSouth also pointed out that requiring carriers to replace or retrofit handsets gives subscribers an economic incentive to delay any handset replacement until the carrier is obligated to pay for the new phone.<sup>20</sup> GTE Wireless Incorporated (GTE") was similarly concerned about retrofitting costs, stating that any measures adopted by the Commission to require the retrofitting or replacement of handsets should be fully supported by cost recovery mechanisms legislated by the states.<sup>21</sup> The Rural Cellular Association ("RCA") added that the Commission must take into account the relative hardships which smaller carriers will encounter if faced with replacement/retrofit requirements.<sup>22</sup>

Finally, the Commission should regard with caution certain statements made by IDC regarding the ease and lack of expense associated with retrofitting handsets. In particular, IDC asserts that: (1) if the FCC indicates that handset-based solutions are acceptable, equipment manufacturers will build batteries with a GPS chip to meet any retrofitting requirements; and (2) the battery life for a wireless handset is typically 11 months, enabling a high churn rate for

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<sup>18</sup> Aerial Comments at 3.

<sup>19</sup> BellSouth Comments at 6.

<sup>20</sup> *Id.* at 6-7.

<sup>21</sup> GTE Comments at 6-7.

<sup>22</sup> RCA Comments at 3-4.

retrofitting.<sup>23</sup> IDC further asserts that through its discussions with equipment manufacturers, it has determined that both the GPS chip and the GPS antenna can easily fit into both new wireless handsets and batteries.<sup>24</sup> While PCIA believes that IDC is well intentioned, it is impossible for PCIA's members to ascertain whether the battery and equipment manufacturers made the representations alleged by IDC, and, if so, whether they will be able to fulfill these promises. Given the unsubstantiated nature of IDC's technical assertions, the Commission should not rely on them to mandate any type of handset replacement or retrofitting program.

#### **IV. A NUMBER OF COMMENTERS JOINED PCIA IN ENDORSING THE WEIAD PROPOSAL FOR DETERMINING ALI ACCURACY**

In its opening comments, PCIA stated that the Commission should reconsider its decision to use an RMS methodology to measure location accuracy, because even a small number of extremely inaccurate measurements (*i.e.*, outliers) will cause a carrier not to be compliant with the ALI requirement even if the vast majority of location measurements are accurate to within 125 meters. As a result, PCIA expressed support for the WEIAD proposal whereby "Phase II location will be attempted on all 911 calls routed toward a Public Safety Answering Point ("PSAP") and will be accurate to within 125 meters in 67% of these cases."<sup>25</sup> A number of carriers and manufacturers—including AT&T,<sup>26</sup> BellSouth,<sup>27</sup> Ericsson,<sup>28</sup> and Omnipoint

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<sup>23</sup> IDC Comments at 13.

<sup>24</sup> *Id.*

<sup>25</sup> See Letter from James R. Hobson, National Emergency Number Association, acting for WEIAD, CC Dkt. No. 94-102, dated November 25, 1998.

<sup>26</sup> AT&T Comments at 3.

<sup>27</sup> BellSouth Comments at 8-9.

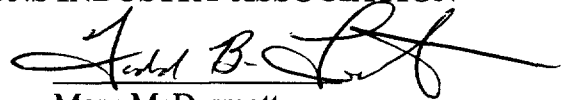


Communications, Inc. ("Omnipoint")<sup>29</sup>—also supported the WEIAD proposal. Given the breadth of this support, the Commission should consider reevaluating its reliance on the RMS methodology for calculating ALI accuracy.

## V. CONCLUSION

In crafting its rules and policies regarding handset-based solutions to its E911 Phase II requirements, the Commission should take three steps based on the comments filed in this proceeding. First, the FCC's rules and policies should encourage new and innovative solutions through the use of flexible implementation schedules. Second, there should be no requirement that carriers retrofit or replace existing handsets in order to meet the Phase II requirements. Third, the Commission should adopt the ALI accuracy methodology proposed by WEIAD.

Respectfully submitted,  
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<sup>28</sup> Ericsson Comments at 5-6.

<sup>29</sup> Omnipoint Comments at 5.